

Institution: Newcastle University

Unit of Assessment: 16

a. Overview

The Architecture, Built Environment and Planning UoA at Newcastle University is renowned for its globally-important and interdisciplinary research, which combines sophisticated, critical and rigorous scholarship with a commitment to environmental and social justice and inclusion. In particular, our work fulfils Newcastle University's mission of 'Excellence with a Purpose' by pursuing *research that shapes actions* in government, industry and cultural life through varied modes of research and engagement.

Our submission comprises the outputs of 41.8 FTEs and encompasses the work of three research groups: the Architecture Research Collaborative (ARC) and the Global Urban Research Unit (GURU), based at the School of Architecture, Planning and Landscape; and the Centre for Rural Economy (CRE) in the School of Agriculture, Food and Rural Development (AFRD). There is strong inter-linkage and vibrant cross-participation between these groups, with GURU acting as a pivot between ARC and CRE.

The vitality and sustainability of the groups are evidenced by key achievements in the assessment period:

- Over 400 refereed articles, book chapters and fully refereed conference proceedings published alongside 37 books, with more than ten languages represented in translations;
- Growth in the strength and coherence of architectural research through strategic investment with a doubling in staff submitted (14 FTE) as against 7 in RAE2008;
- A sustained high-level performance with Research Council funding of £2.7m. including the location of the £25 million interdisciplinary RELU (Rural Economy and Land Use) programme in the UoA, via the establishment of the Programme Director's Office in CRE;
- Sustained high level of research income including a major growth in EU funding of over 50% to £1.8m, as part of our strategic goal of internationalisation identified in RAE2008;
- The founding of Newcastle University's Institute for Social Renewal, led by GURU's **Shucksmith**;
- A major expansion of post-graduate programmes, with more than 70 PhD graduations in the assessment period and 7 new masters programmes launched;
- Major societal impacts from research such as through Scotland's Crofting Commission, and through regional knowledge networks such as the Northern Rural Network (see REF3A).

b. Research strategy

Strategic Priorities

In UoAs 30 and 31, RAE2008, internationalisation and interdisciplinarity were identified as strategic priorities. Both have been significantly achieved. Internationalisation activities concentrated on the consolidation and development of European-partnered research, especially interdisciplinary work on urban and rural sustainability [see Section d]. Increasing interdisciplinary activity is evidenced in activities such as the leadership of the £25 million RCUK RELU programme (see section e).

Internationalisation and interdisciplinarity continue to be fundamental, but for the 2014-18 period we see these as platforms that underpin our pursuit of a number of, primarily more substantive, research priorities. The seven presented below are a synthesis of the priorities of the three centres and serve also to highlight the synergies between the groups:

1. Planning, Communities and Governance. This strand builds on the global reputations of CRE and GURU in planning and place governance (particularly participatory and collaborative approaches) (**Davoudi, Gunn, Healey, Lowe, Shucksmith, Tewdwr-Jones, Vigar, Webb**). Work extending into the next REF cycle for ESPON-TANGO (**Davoudi, Madanipour, Vigar**), and the Royal Town Planning Institute (**Healey, Vigar**) will advance understandings of 'good' territorial governance and successful planning. This links closely to on-going work on neighbourhood

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planning and includes research into participatory civics that brings together new spatial media and more traditional planning methods in interdisciplinary collaborations with computer scientists in the University's Culture Lab (**Tewdwr Jones, Vigar**). CRE and GURU will further develop the practice-orientation of their research, refining theory to inform future practices through research that is often co-produced with 'users'. CRE examples extending into 2014 include their involvement in the North East Rural Growth Network, providing research to help understand the role of enterprise hubs (**NThompson, Garrod**). New CRE research also explores the impacts of the global financial crisis in community development and change (**Gkartzios, Garrod**).

2. Environmental Futures. With an objective of analysing the complex ways in which environmental futures are debated, realized and publicly disseminated, and of understanding these processes with a view to the common good, this research priority is closely connected with the University's Sustainability 'Societal Challenge Theme' and its Institute for Research on Environment and Sustainability (NIReS). Research here is wide-ranging, from work on utopias (**Coleman**), landscape (**Roe, IThompson**), protected areas (**NThompson**), insect pollinator decline (**Scott**), land management advice (**Phillipson**), buildings, energy and carbon futures (**Calderon, Farmer, Hamza**), to other interfaces with natural science and engineering disciplines (**Button, Donaldson, Lowe, Phillipson**), including the EPSRC funded SECURE Project on urban retrofitting in China (**Davoudi, Pendlebury**); and work on sustainability appraisal (**Gazzola**) and indicator development (**Garrod**). An emergent area is that of marine governance (**Davoudi, Gazzola, Phillipson, Roe**), with projects EU-ARCH on estuarial governance and 'HydroCitizenship' for AHRC continuing into the next REF cycle. A key priority for the future is to bring together our energy research with others in Newcastle University, notably civil engineering, using NIReS as a vehicle for such interdisciplinary work.

3. Cultures and Change. This priority builds on a wealth of research, e.g. **Ballantyne, Kellett** and **Kezer**, (recipient of the prestigious MIT/Aga Khan postdoctoral fellowship 2013/14 for work in this field) relating to the analysis of historical and contemporary cultures and environments in transition. This is a crucial topic in an era of accelerating globalization and technological change and encompasses work on the cultural impacts of the financial crisis in rural and urban Europe (**Gkartzios, Scott**). Two international projects further our aims on culture and heritage, extending into the next REF cycle: PUMAH (**Law, Pendlebury** to 2016), which examines issues of managing cultural heritage as part of urban change in the different contexts of China and Europe, and a Joint Programming Initiative project on the future of the historic urban core in Europe (**Pendlebury**). Closer to home, three AHRC-funded inter-disciplinary projects seek to explore community heritage, co-designed with communities themselves (**Gkartzios, Law, Pendlebury, Scott**).

4. Social Justice, Wellbeing and Renewal. APL hosts the Newcastle Institute for Social Renewal, under the directorship of **Shucksmith**. The priority consolidates long-standing work on urban and rural development and social inclusion from the scale of individual buildings upwards e.g. **Lowe** and **Shucksmith**'s work and the latter's on-going ESPON TIPSE project (also **Madanipour**). Work on place, health and well-being is notable in this area (**Gilroy, Scott, Townshend**) and will be taken forward with two EPSRC projects awarded in 2013 (extending well into the next REF period) on the implications of Ageing and Mobility for towns and cities, one of which again involves an interdisciplinary collaboration with computing scientists in Culture Lab.

5. Discourse, Power and Materiality. This priority develops new inquiries into urban and architectural discourses of materiality, interrogating their epistemological dimensions and analysing them with regard to relations of power and affect. It encompasses work on bio-, food and urban security (**Donaldson, Graham, Midgley**). It also connects with on-going work on the history and contemporary transformations of materials specification in architecture, and on modes of embodied criticality (**Lloyd Thomas**). Our organization of the Architectural Humanities Research Association conference 2014, titled 'Industries of Architecture', relates to this priority, as does emergent work such as **Farmer's** on material up-cycling (EPSRC seed-funded U-TEC project, leading to major EPSRC bid); and a network on 'Architecture's Unconscious' (**Ballantyne, Blom, Lloyd-Thomas**) funded initially by APL's symposium fund (conference 2013) and then by Newcastle University.

6. Research by Design. This priority builds upon new appointments (see section c), which has strengthened the design-based research of those such as **Farmer**, has led to the establishment of a PhD by Creative Practice and an MA in Architectural Design Research, and links to the new

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cross-faculty Newcastle Institute for Creative Practice (NICAP). Since RAE2008, two design research practices have become established within APL: *Status*, headed by **Ozga-Lawn**; and *Design Office*, led by **Sharr**. Achievements in the REF period include the award of the international Pamphlet Architecture Prize for *Status*'s project 'Animate Landscapes' (**Ozga-Lawn**, 1). In the forthcoming period, work will develop toward a substantial research by design submission for the next assessment.

7. Expertise and Knowledge Exchange. This area explicitly attends to the theoretically informed yet practice-oriented nature of our work and in particular extends the work of the RELU Director's Office within CRE and the Newcastle Institute for Social Renewal office in APL (**Shucksmith**) to develop trans-disciplinary, co-produced research with communities, specialists and policy makers. Previous successes, such as **Lowe's** impact on the establishment of the Veterinary Development Council and Landbridge, an ESRC-funded inter-professional learning network for the land-based professions led by **Phillipson**, provide future models for work which will include a pro-bono community planning advice service housed in APL.

c. People:

Staffing strategy

The principal objective in architecture research has been to consolidate scholarship in the context of the new ARC research structure, developing greater critical mass and coherence. The success of this is evidenced by the number of architecture staff submitted to REF, which is double that of RAE2008 and includes several new appointments: **Austin, Dade-Robertson, Farmer, Hamza, Lloyd Thomas, Ozga-Lawn** and **Sharr**.

GURU has extended its position as a globally-renowned centre for urban research. At senior level, we fulfilled a commitment to promote research into practice by appointing two scholars recognised to be significant *public intellectuals*, replacing departing colleagues with individuals who could promote Newcastle research as well as strongly contribute to it: **Graham**, from Durham, a world-leading urban theorist and commentator (replaced Frank Moulaert); and **Tewdwr-Jones**, from UCL, an internationally-significant planning scholar central to practice debates in the UK and beyond (replaced Jean Hillier). They were joined by new lecturers: **Button, Donaldson, Law, Midgley** and **Webb**, all of whom are also strong theorists with a practice orientation.

Across APL there are nine staff at professorial level compared with seven in the previous RAE period, all under 60 years of age on REF census date, securing the vitality of the research into the medium-term. Internal promotions in the REF period highlight the success of staff in research terms and the commitment of the University to them and their Centres: seven promotions to senior lecturer, two to readers and two to personal chairs.

CRE is a world class centre for applied social science research in rural development, food and agriculture. In the area of rural development it has extended its research capacity by strengthening capability in the key areas of rural planning, governance, wellbeing and cultural economy. This resulted in the appointment of **NThompson** to a new permanent lectureship (from temporary research fellow), and the appointments of **Gkartzios** (lectureship) and **Scott** (research fellow) who add significant research capacity, new international collaborative research links and new directions for research. **Phillipson's** promotion to Reader reflects his research achievements and his significant external engagement through a wide range of external advisory roles.

Our commitment to early career support has enabled junior researchers to secure appointments against strong external international competition: **Ozga-Lawn** and **Webb** were promoted to lectureships following PhDs in APL; **Button** from teaching associate to lectureship; **Law** from research associate to lectureship; **Donaldson** from CRE Research Fellow to lecturer, then senior lecturer in APL. In addition, **Abohela** and **Brooks** (both APL PhDs), **Cowie** (APL/ CRE PhD), **Lee, Dilley, Wilkinson, Giles, Kendall** (CRE PhDs) and **Scott** (Politics PhD) were appointed from research studentships in Newcastle to research associates/fellows. It is noteworthy that **Abohela** and **Ozga-Lawn's** appointments both result from studentships funded by APL to expand research capacity in the areas of energy research and research by design.

For all staff, the University's annual Performance and Development Review process is

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supplemented by mentoring and support arrangements common to ARC, GURU and CRE. All staff have access to mentors who provide advice on career development and peer review journal articles and research funding bids. Particular attention is paid to research associates and early-career researchers. Research centre themes also act to structure *group mentoring* and research bids and papers are shared and discussed among peers. A wider peer-review system for research funding proposals is managed by School Directors of Research, drawing on a panel of experienced researchers across the University. In addition, training events and School-wide discussions of research policy are regularly funded and organised with annual away days for research centres supplemented by termly formal meetings and theme meetings, reading groups, etc. in between.

Research Students

Our RAE2008 priorities of internationalisation and interdisciplinarity are reflected in achievements relating to postgraduate recruitment, research and supervision. In the REF period 27 nationalities were represented in our PhD community and 69 FTE students graduated (see REF4a). Our significance in developing future academics is indicated by outputs such as **Kellett's** book *Researching the Contemporary City*; and **Madanipour's** *Whose Public Space?*, both of which consist solely or principally of chapters written by former APL PhD students, now academics throughout the world.

Interdisciplinary supervision of students occurs across the UoA, demonstrated by sharing of students between ARC, GURU and CRE. In addition, 15 students have been co-supervised with other schools in Newcastle University. Collaboration is fostered by CRE and APL's sharing of the Environmental Planning Pathway in the ESRC-funded Doctoral Training Centre (DTC) held jointly between Newcastle and Durham Universities. In the REF period 7 students have been funded through this route, while a further 8 have received RCUK funding. Prior to the DTC, 13 ESRC-CASE awards furthered links with industry partners, as did two Food Standards Agency-funded studentships. During the REF period, APL fully funded 11 doctoral students and part-funded 6 others (3 jointly through funded research projects [PUMAH, PATINA], 2 in conjunction with external sponsorship). In addition, a studentship was fully funded by external sponsorship (Churchill Homes) and another 2 through NIREs. The success in 2013 of the Northern Bridge Doctoral Training Partnership (with Durham and Queen's Belfast) will bring a share of 157 AHRC-funded PhD students in the 2014-8 period to humanities researchers in the UoA; and an EPSRC DTC in Digital Civics will bring a significant share of 66 1+3 students to APL from 2014.

The vitality and sustainability of PGR activity is enhanced by students' direct participation in research centre activity. Actions take a variety of forms, including weekly seminar series, which bring together academic staff and research students who contribute presentations along with staff and invited speakers; and reading groups for postgraduate students and staff. APL's in-house journal (online and print), *Forum*, edited by research students and peer-reviewed by staff, provides opportunities for publication, as do CRE and GURU Discussion Paper series. Annual PGR conferences for APL and CRE bring staff and students together to discuss student work, and a Faculty Conference is held for first year students.

Students are also encouraged to design activities funded by the University. For example, in 2012/13 CRE research student, Hunt, developed a seven seminar series '*Being a Specialist in a Complex World*' for PhD students who will engage with a wider, non-academic public in their professional or research careers. The programme (which ran again in 2013/4) allows participants to learn about working in inter-disciplinary teams with stakeholders, policymakers, journalists and researchers. Also in 2012/13, ARC student Stevanovic initiated *Surface - A collaborative curatorial PGR platform* which curates and produces a contemporary art programme both within the University and beyond in a context specific to PGR interests. Finally, GURU student, Pringle, initiated a conference in 2013 on community energy systems involving practitioner-speakers from the UK and Europe, which usefully linked energy research in APL and the wider University to various research, and particularly practice, communities.

All PhD students undertake a dedicated research training programme in the Faculty of Humanities and Social Sciences. This is a Higher Education Academy award-winning postgraduate research training programme that provides both disciplinary and generic research training within an interdisciplinary and multi-cultural learning environment. This wide-ranging programme provides

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the epistemological and methodological research skills to enable Doctoral students to complete their doctorates successfully. Additionally it fosters research collaboration and communication among PGRs across all the disciplines in the Faculty. The programme provides the foundation for the ESRC-funded North East Doctoral Training Centre and the AHRC Northern Bridge Partnership.

In addition, students in this UoA can take the Postgraduate Certificate in European Spatial Planning. Hosted by APL until 2010 and with continuing participation from its staff, this is an intensive, three-month programme bringing together PhD students from European universities, drawing on our extensive European research links. Since 2011 GURU has also run an additional weekly 2 hour workshop on social theory throughout term times to help PGR students situate their work in broader theoretical and conceptual debates.

The sustainability of postgraduate research is enhanced by a strategic expansion of APL masters programmes within the assessment period. Seven have been launched: 4 with close links to research in ARC; and 3 developed in GURU, including a joint MSc with CURDS (Geography). PGR training in CRE is underpinned by a long standing MSc in Food and Rural Development Research. All programmes link undergraduate and doctoral studies and have a key role seeding the latter.

d. Income, infrastructure and facilities

Income

During the assessment period the UoA generated £5.1m in research spend with, in line with our 2008 Strategy, the two key elements being the blue chip sources of research councils (£2.7m) and European Union grants (£1.8m).

Our research council grant activity spreads across five research councils, demonstrating high levels of inter-disciplinarity. Our AHRC work includes the 'Mock Tudor Architecture' project (e.g. **Law** 1). Research for ESRC is evidenced through the landmark Science in the Field project (outputs by **Phillipson, Lowe, Donaldson**), graded Outstanding by ESRC; and in spatial planning e.g. **Vigar**, 4). For EPSRC notable interdisciplinary work is evidenced in the ARCADIA project on urban governance and climate change (**Davoudi**, 1); and eViz on energy visualisation (**Hamza**, 1). Inter-disciplinarity is also strongly evidenced in research for cross-cutting research council programmes e.g. ESRC/BBSRC/NERC Rural Economy and Land Use (RELU) Programme (outputs by **Lowe, Phillipson, Oughton** and **Donaldson**); and EPSRC/AHRC research technology visualisation project PATINA (**Dade-Robertson**, 3).

As indicated in Section B, we promoted an internationalisation agenda through targeting European grants. Success in this area is evidenced in the award of 18 EU-funded projects in the assessment period, including a significant presence [5 awards] in the ESPON (European Observation Network for Territorial Development and Cohesion) programme. These were complemented by other European-scale projects such as two funded by non-UK European Research Councils (Flemish Research Council [IVT] and Norwegian Research Council) and a Joint Programming Initiative on Urban Heritage extending to 2015. More recently, China-focused projects have been developed in response to the challenges of its fast urban growth: SECURE (EPSRC) and PUMAH (EU), have used our European Networks to promote collaborative research between European and Chinese universities on managing urban development. Our European funding has also directly led to high quality publication, as evidenced in our outputs, e.g. Social Polis (**Vigar**, 1); **Shucksmith's** ESPON funded scholarship on European rural exclusion (output 2); **Davoudi's** influential European Environment Agency-cited *Climate* project; and the CRE project SEAMLESS which explores future alternative environmental and agricultural policy options in Europe (**Garrod** 1,4).

Infrastructure

The infrastructure that sustains our research and enables the generation of grant income is critically dependent on the activities of the 3 research centres. Each centre establishes its own orientation within a framework developed by School research directors and committees. This in turn is closely articulated with strategic research initiatives at University level, notably the three 'Societal Challenge Themes' of Ageing, Social Renewal and Sustainability and attendant research institutes, which are connected to Newcastle's vision of its role as a World Class Civic University.

The identification of research themes is crucial to the sustainability and vitality of the UoA's research culture. Each theme focuses on one or two key deliverables each year (a significant international conference, publicity/engagement activity, developing a collaborative research project, establishing a series of workshops on a policy issue, etc.). Themes are used to develop work and focus research attention rather than provide a home to individual researchers. They are mobilised by co-ordinators to build a research culture (via reading groups, workshops, etc.) and to promote scholarly networking and exchange among members. The organization is dynamic: the themes can involve participation from researchers from both within and outside research groups and indeed from other institutions; they can run for varying lengths of time depending on their productivity, and new themes can be easily established; and researchers can have membership across a number of themes, cultivating both specificity in research and integration across centres as a whole. All the themes organised through the research centres articulate with the strategic priorities identified in section b, above.

During the REF period, architecture research structures were reconfigured, shifting from two groups to one (ARC). The identification of initial themes – namely Specifications, Prescriptions and Translations; Futures, Values and Imaginaries; Cultures in/and/of Transition; Mediated Environments; Social Justice, Wellbeing and Renewal; and Research by Design – responds to on-going work and allows different research methodologies (technical, social science, humanities) to productively come together.

GURU's research themes were amended in 2010 to reflect the changing foci of its researchers: Cities, Security and Vulnerability; Cities and International Development; Planning and Environmental Dynamics; and Power, Place and Materiality. The main change responds to a research priority identified in RAE2008, to expand our work on security and vulnerability, in part realised through the appointment of **Donaldson, Graham** and **Midgley**.

CRE themes were revised in 2011 to respond to the evolving interests of new and existing researchers and to take account of opportunities for interdisciplinary research arising from new University research institutes and funding programmes. The themes are: Agriculture, Climate Change and Environment; Rural Planning, Communities and Governance; Rural Change, Social Justice and Wellbeing; Rural Economy and Innovation; and Rural Cultures, Nostalgia and Identity.

In addition, a range of University and School-level actions promote research vitality through a range of mechanisms: giving people *time* in annual workload allocations and sabbaticals; upgrading *skills* through internal mentoring and University staff development programmes; and *finance* through internal recycling of funds and the allocation of seedcorn and other monies.

In relation to *time*: all HEFCE-funded research-active staff are granted a minimum of 700 hours for research in School workload models. A structured approach to bidding has been adopted by APL whereby a number of people are prioritised each year to bid for research grants with adjustments to workloads to enable this. APL also has a policy of granting a sabbatical of one semester every four years, often to enable the development of successful bids, e.g. **Townshend** *From Park to Club* for Joseph Rowntree and **Hamza's** EPSRC *eViz* project.

Staff are supported in developing *skills* by strong proactive mentoring through both one-to-one and 'group mentoring' (meaning here a system in which an individual has recourse to a group of colleagues for academic advice). In addition, staff development programmes at Faculty and University levels have led to significant outcomes, e.g. **Dade-Robertson's** Faculty Futures participation and School support led to the PATINA project.

With regard to *finance*, School Research Committees have annual devolved research budgets which are supported by other financial mechanisms. Research committee budgets are allocated through bids by individual researchers for, e.g. sabbatical costs, to seed fund larger bids, for conference attendance or fieldwork, replacement teaching, permissions fees for publications, etc. Each case must be justified in relation to Schools' strategic research aims, and priority is given to early career researchers. In APL specific funding is allocated to two symposia per year centred on academic networking for future research or for research dialogue with practitioners. These initiatives are in addition to existing Newcastle University funds for visiting fellows and professorships and for conference underwriting. The University Research Committee also allocates up to £150,000 per year in strategic development funding to accredited University Research

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Centres, which include CRE and GURU. GURU and CRE have been awarded funds from this source for all years 2008-13 which has, for example, pump-primed work on marine planning (**Gazzola, Roe**) leading to AHRC award on HydroCitizenship. In addition, Faculty funds are available to support bid writing, with grants to individuals' personal research accounts for bids in excess of £200k and greater incentive for those in excess of £500k. This is supplemented by a University commitment to the transfer of 100% of research grant funding to Schools, where it is divided between the School (to support research infrastructure), the research centre and the individual's personal research account. In addition, Faculty research funds directed primarily at early career researchers have enabled **Austin, Midgley** and **Webb** to develop research networks, publications and projects which will emerge in the next REF period.

All academic staff have individual rooms with desktop computing facilities linked to the University network. The exceptions are three small 'cluster spaces' which house *Status*, *Design Office* and **Dade-Robertson's** group (2 RAs, 2 PGRs) to facilitate regular interaction. Specialist computing facilities and building science laboratory equipment are also provided. Research administration is underpinned by 1.6 FTE of administrator, including a finance specialist. Two technicians support architectural research. Full-time research students are accommodated in dedicated open-plan offices, providing individual work stations with desk-top PCs and networked computing facilities, together with services such as photocopying, a kitchen, meeting and social spaces.

e. Collaboration and contribution to the discipline or research base

Interdisciplinary research: Deepening inter-disciplinarity is evident across a range of research activities, particularly in projects oriented to Newcastle University's 'Societal Challenge Themes'. These themes of ageing and health; sustainability; and social renewal emerged in the REF period to become significant in orientating our work with others in Newcastle University and beyond, as evidenced in research council grants awarded in each of these substantive areas (see REF4b).

Inter-disciplinary work is also evidenced through the work of individual research centres. CRE hosts the Director's Office (**Lowe, Phillipson**) of the £25 million UK Research Council's RELU (Rural Economy and Land Use) Programme, which supports research requiring social and natural scientists to work together in integrated interdisciplinary projects. CRE, which has itself won 6 RELU projects, is thus at the centre of an interdisciplinary international network of over 450 scientists in more than 50 institutions. Much other interdisciplinary CRE research is funded through EU grants, including work with animal scientists on animal welfare policy in ECONWELFARE (**Garrod**); foresight analysis to guide EU rural development policy (**NThompson**); and work with practitioners and modellers to inform the development of agricultural and land use policy in SEAMLESS and PRIMA (both **Garrod**). Other interdisciplinary CRE work includes Northumberland Exchanges, the recent AHRC funded project exploring creative community engagement (**Scott, Gkartzios** also **Law, Pendlebury**), work with Defra on understanding bee-health (**Scott**) and two projects working on knowledge exchange in Defra's Test Catchment projects (**Oughton**).

In GURU, inter-disciplinary research has used University societal challenges and associated institutes as one platform for collaboration. This has included work connecting to the challenge theme of Sustainability (e.g. **Davoudi's** EU projects, ARCH and SUME; and EPSRC projects, ARCADIA and GLOBAL-SECURE with civil engineers). Links to Newcastle's Ageing and Health challenge e.g. inter-disciplinary work in China, India, Japan and the UK (e.g. **Gilroy, Townshend Speak**) and research awards in 2013 on Ageing and Mobility (total to APL £350k) from EPSRC.

Interdisciplinary approaches are equally evident in ARC, where they are mobilised to tackle key practical and theoretical concerns: **Sharr's** collaborative project on Whitehall (architecture, political science, (output 1) is a prime example. **Dade-Robertson's** EPSRC/AHRC-funded PATINA project on data-visualization and research space (architecture, IT, media studies, computer science) involved extensive collaboration with Newcastle University's media centre Culture Lab, the British Library and the V and A. He is also collaborating with surgical researchers (Edinburgh University) to develop work on synthetic biology. Other examples include **Ballantyne** and **Law's** AHRC-funded study of 'Mock Tudor' (**Law** 1) drawing on their respective disciplines of architectural history and sociology; *Status'* (**Ozga-Lawn**, 1) Princeton Pamphlet Prize-winning 'Animate Landscapes', which was also presented at the Baltic Centre for Contemporary Arts; and **Hamza's** eViz energy

visualisation project with psychologists and IT specialists.

Research collaborations with users: CRE is structured to pioneer innovation in knowledge exchange in rural development research, as evidenced in prizes for the RELU programme and **Lowe's** Bertebos Prize. Other examples include the development of the Northern Rural Network (NRN) which grounds its research in the concerns of practice communities. Launched in 2000, it is a learning network bringing academic researchers together with over 1400 businesses, rural professionals, community and voluntary organisations across northern England. Over 14 years CRE has run more than 60 NRN events covering a range of topics of interest to rural professionals facilitating the exchange of research findings and practice-based knowledge. The success of the network has led to it being used as the model for networks in Japan (Kobe) and the USA (Cornell). Landbridge (**Phillipson**) uses funding from the ESRC and the Living with Environmental Change Partnership to further extend this co-production model through a knowledge exchange network for rural professionals.

Researchers have held significant roles advising government and other national and international bodies. These are encouraged and in significant cases workload allowance made. They enrich the research environment, particularly in relation to our strong practice-orientations. Roles at the national level include: **Tewdwr Jones**, Land Use Futures for UK government, and he and **Vigar** are part of a small team advising the Shadow Planning Minister on the Labour Party's approach to planning; **Davoudi** and **Phillipson** are both members of the Social Science Expert Panel for Department for Environment, Food and Rural Affairs and Department of Energy and Climate Change. Previously **Willis** was on the preceding panel along with **Davoudi** who was also on the Expert Panel, Department of Communities and Local Government (DCLG) Housing Markets and Planning Analysis (2007-2010); **Donaldson** was Expert Advisor to UK National Audit Office on Animal Health Policy (2008-09) which led to shaping of NAO report on 'Livestock health'; **Shucksmith** served on the board of the Commission for Rural Communities (until abolition in 2013) including chairing a report on rural housing published by Defra. He is a Trustee of the Arkleton Trust; on the Steering Group of Carnegie UK Trust's rural programme; and is part of the European Commission DG Regio, Expert Group on Territorial Cohesion. **Phillipson** is a member of the Scottish Government RESAS Strategic Research Board, a member of the Living With Environmental Change Partnership's Ecosystems Task Force, and served on Defra's Higher Level Expert Panel set up to advise its Rural Economy Growth Review. The research environment is further enriched through appointments to regional bodies such as: **Shucksmith** as Special Advisor to the Glendale Community Development Trust (**Healey** is Chair); **Davoudi** as Member of North East Region Academic Panel (2008-10) and Member, North East Region Sustainable Resource Stakeholder Group (2007-).

Key memberships of European networks also underpin our success with regard to European funding and our internationalization objective. For example: **Davoudi** is: member of International Expert Group, Randstad 2040 Strategic Vision set up by the Dutch ministry for planning with potential impact on Dutch national planning strategy; an Expert Advisor, EU DG Regional Policy, on the Green Paper on Territorial Cohesion with potential impact on the content of the Green Paper; and, an Advisory Board Member of the ESPON UK Contact Point (established by DCLG 2008-2012) which shaped the ESPON research programme. **Shucksmith** is a member of European Commission DG Regio's Expert Group on Territorial Cohesion; and the OECD Expert on the RURBAN project.

GURU's Cities and International Development theme is informed through links with UN-Habitat in particular. Tipple (retired 2012) was on the UN-HABITAT Advisory Board of the Global Research Network on Human Settlements (HS-Net), 2007-09 (Co-chair, 2008). This led to **Davoudi**, **Healey** and **Vigar** producing a chapter in the Global Report on Human Settlements 2009 (London: Earthscan) and **Davoudi** speaking at the launch of the Report. **Speak** continues this work and initiated a UN Habitat Partner University Initiative on food security in 2012, with principal collaborators in India, Netherlands, Nigeria, Peru and USA.

National and international academic collaborations: A primary means of national and international academic collaboration is through funded projects (see above). In addition, RCUK supported seminar series have the specific purpose of building research collaborations to enrich the research environment. ESRC series include: bio-security (**Donaldson**); urban resilience

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(**Graham**); urban security (**Donaldson, Graham**, MurakamiWood (left 2009); and Managing Borderlands (**Donaldson**).

Newcastle staff from the UoA have held 15 visiting professorships in other institutions, helping research collaboration. Mostly these are European, reflecting this focus of our internationalisation strategy, but North American links figure strongly including Berkeley (**Tewdwr Jones**), New York (**Graham**) and Cornell (**Lowe, Shucksmith**). The latter link is strengthened through The Trans-Atlantic Rural Research Network (TARRN) also with Penn State, Queen's Belfast, and Aberdeen and its 'The Good Life' conference is hosted in CRE in 2014, underpinned by School funding.

Significant research collaborations are also evident, particularly in Europe and China. In Europe, for example, GURU's research network underpins its EU funded research with strong links to Nordregio (4 projects in the REF period); Delft University (3 projects); and Leuven, Milan-Bicocca, and Politecnico di Torino (2 projects each). We also welcome many visitors. For example, GURU has hosted over 40 international visitors and CRE 27 in the REF period. Many highly distinguished guests such as Bill Rees helped develop our critical scholarship, while others, such as a substantial number from China, principally Peking, Wuhan, XianAUAT have reinforced research projects such as Global-Secure, SUME and PUMAH.

Seminar series, contribution to journal editorship, conferences: In 2010 APL restructured its seminar and public lecture provision to commit substantial resource to three inter-related tiers that fulfill different functions – and address different constituencies. The first tier, a weekly research seminar series, provides a forum for presenting and discussing work-in-progress by invited scholars, staff and PhD students. The second tier constitutes APL's public lecture series with presentations linked to APL's research but also addressing a wide-ranging academic and public audience. Speakers in the period have included Dan Dorling, Anthony King, and Ananya Roy. All presentations are videoed and uploaded to YouTube. Finally, APL has introduced an Annual Public Lecture delivered by an eminent academic whose work is of particular interest: Richard Sennett delivered the first in 2012; Eyal Weizman gave the second in 2013. A CRE seminar series provides a forum to discuss current rural research with guest academics, staff and postgraduate students.

In addition, speakers and guests are often invited to give both a research seminar and a public lecture, and to engage with researchers in APL through a special event, e.g. Iain Boal on the history of the bicycle; Matthew Gandy (APL visiting professor) in a seminar with staff on inter-disciplinarity; Owen Hatherley in a symposium on Ruins [organised by John Beck (English, Newcastle University)]; and Steve Rowell [Centre for Land Use Interpretation, USA] whose Newcastle University funded Fellowship involved a mobile workshop at post-industrial and military sites in the North-East. Other strategic use of University funds to invite scholars to Newcastle to foster collaboration include Graham Rowles (Kentucky) - one of the World's foremost social gerontologists – who came to APL for one month to build networks for two successful EPSRC bids on ageing and mobility. Other visiting professors have included Leonora Rozee, whose presence influenced work on planning professionalism (**Gunn, 3; Vigar 2**); Phil Allmendinger, whose presence on the ESRC Review Panel was utilized to inform research council bidding; and Gert de Roo, who is developing a number of bids around an emerging area of *Participatory Civics*.

APL has organised a series of one-off symposia and conferences related to staff research, e.g.: Architecture's Unconscious, 2013 (organised by **Ballantyne**, Blom, **Lloyd Thomas**, funded by APL) involved speakers such as Wolfram Bergande (Bauhaus Weimar) with a further event planned for February 2014; 'Science Fiction in the Present: Military Technology and Contemporary Culture' (organised by **Graham** and Dorrian (left 2013), 2011: speakers included David Cunningham and Noel Sharkey); 'Further Reading Required' (organised by **Lloyd Thomas**, with Tilo Amhoff and Nick Beech), 2011 at UCL: speakers included Antoine Picon and Adrian Forty, with papers published in a special issue of Architectural Research Quarterly; a series of 3 workshops on Planning and Localism in 2011 (organized by **Gunn** and **Vigar**) led to Catherine Cookson Trust funded research on neighbourhood planning and follow-up workshops funded by the Newcastle Institute for Social Renewal in 2012 (leading to edited book by **Davoudi** and **MadaniPour**) and 2013.

Multi-day conferences organized by APL, all of which were underwritten by Newcastle University, include: UK/ Ireland Planning Research Conference 2009 organised by **Pendlebury, Townshend**,

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Vigar, included speakers Ash Amin and Solly Angel; Ethics and Aesthetics of Architecture and the Environment organised by Blom and **IHThompson**, 2011: speakers included Emily Brady and David Leatherbarrow; Architecture in the Space of Flows organised by **Ballantyne**, who edited a subsequent book (2011), which engaged architects, artists, designers, sociologists and scientists such as Stephen Loo and Peter Mortenbock. GURU also hosted a two-day Symposium to celebrate its 10th Anniversary, which included presentations from current members (e.g. **Davoudi**, **Graham**, **Healey**, **Shucksmith**, **Tewdwr Jones**), former members (e.g. Jean Hillier) and visiting professors Matthew Gandy (UCL) and Simon Marvin (Durham). This helped define future research trajectories in GURU. Major events organised under the Relu Programme (**Lowe**, **Phillipson**) include The Future of Rural Land Use (2009); Adapting Rural Living and Land Use to Environmental Change (2010); New Horizons for Animal and Plant Disease (2011) and Who Should Run the Countryside? (2011). In 2014 ARC hosts the Architectural Humanities Research Association conference, titled 'Industries of Architecture: Relations, Process, Production'. The focus of the event fits squarely with research direction in APL and the conference has been underwritten by the University.

A number of publishing relationships highlight our connections to wider academic worlds and inform research. These are often facilitated through active school policy and workload allocations. **Powe** has been Managing Editor of the in-house *Journal of Environmental Planning and Management* (JEPM) from 2009, taking over from **Willis**. **Willis** has been *Journal of Environmental Economics & Policy* Editor from 2012; **Davoudi** is founding member on the editorial board of the *Journal of the Academy of Social Sciences* (21st Century Society 2004-2010, *Contemporary Social Science* 2010 to date); *Landscape Research* has been edited in APL since 2005 (**IHThompson** 2005-09; **Roe** 2009-2013); **Healey** was Senior Editor (and co-founder) of *Planning Theory and Practice*, to 2010; **Sharr** edits *Architecture Research Quarterly* (from 2007), with the Journal housed in APL from Jan. 2014; **Graham** is Associate Editor of *City* (from 2005); **Garrod** is Associate Editor of the *Journal of Agricultural Economics* (from 2008). During the REF period we have also hosted *Planning Theory* and *Surveillance & Society*.

In relation to book series, 2 contributions demonstrate our concerns for practice and add to the vitality of our practice-informed research: **Healey** edited the RTPI Library Series (Routledge: 2010-13); **Sharr** edits the *Thinkers for Architects* series (with Routledge) which was shortlisted for the Royal Institute of British Architects Research Awards (2008).

Contribution to professional associations and discipline development: staff make numerous contributions to professional associations and learned societies. For example, in ARC, **Ballantyne** was Chair of the Society of Architectural Historians of Great Britain (2006-09) and Chair of RIBA Research Awards panel (2010-12). **Sharr** was a Founder Member and Steering Group Member of the Architectural Humanities Research Association, 2004-date; and Awards Assessor for RIBA Wales 2009 and RIBA Presidents Awards for Research (2012-2014).

In GURU, **Shucksmith** was awarded the OBE for services to rural development and to crofting in 2009. He was First Vice-President of the International Rural Sociological Association (2004-08). **Tewdwr Jones** chairs the publishing arm of the Regional Studies Association, and along with others in GURU is highly active in research debates at the Royal Town Planning Institute where he the only elected Fellow in the North East region, and the Town and Country Planning Association.

In CRE, of particular note is the award to **Lowe** of the Bertebos Prize in 2013 by King Carl VI Gustav of Sweden on behalf of the Swedish Royal Academy, reflecting his achievements and the inter-disciplinary nature of CRE work (he was the first non-economist social scientist to receive it). The €30,000 prize involves his curation of a conference on rural development between Swedish and British rural researchers in 2014. **Lowe**, along with **Shucksmith**, **Davoudi** and **Tewdwr Jones**, is an active member of the Academy of Social Sciences.

One final point of note is the contribution of researchers to research council peer review colleges and the like. For example, **Davoudi** chairs ESRC's Research Seminar Competition Assessment Panel and sits on Grant Assessment Panel C, and has performed similar roles in Finland, France, Netherlands, Portugal, and for the European Commission. The interdisciplinary nature of this effort is exemplified by **Phillipson**, who has also been an assessment panel member for ESRC, NERC, BBSRC and EPSRC.